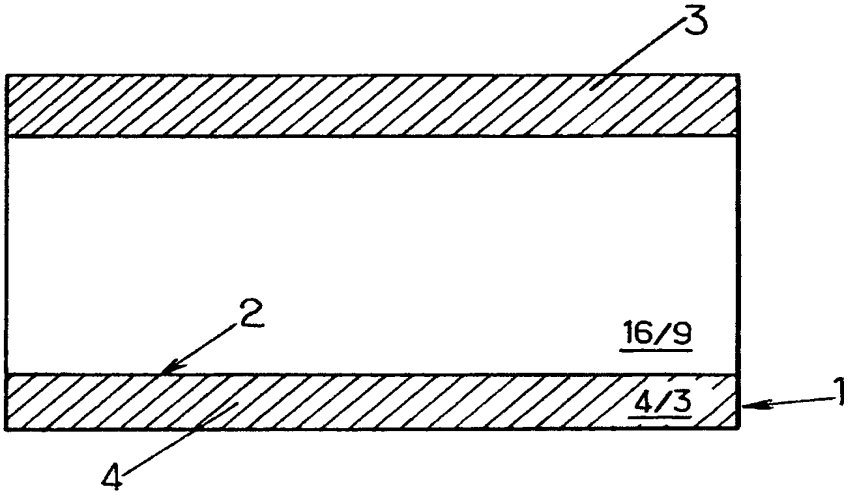

3
2
16/9
4/3
1
4

FIG.1.

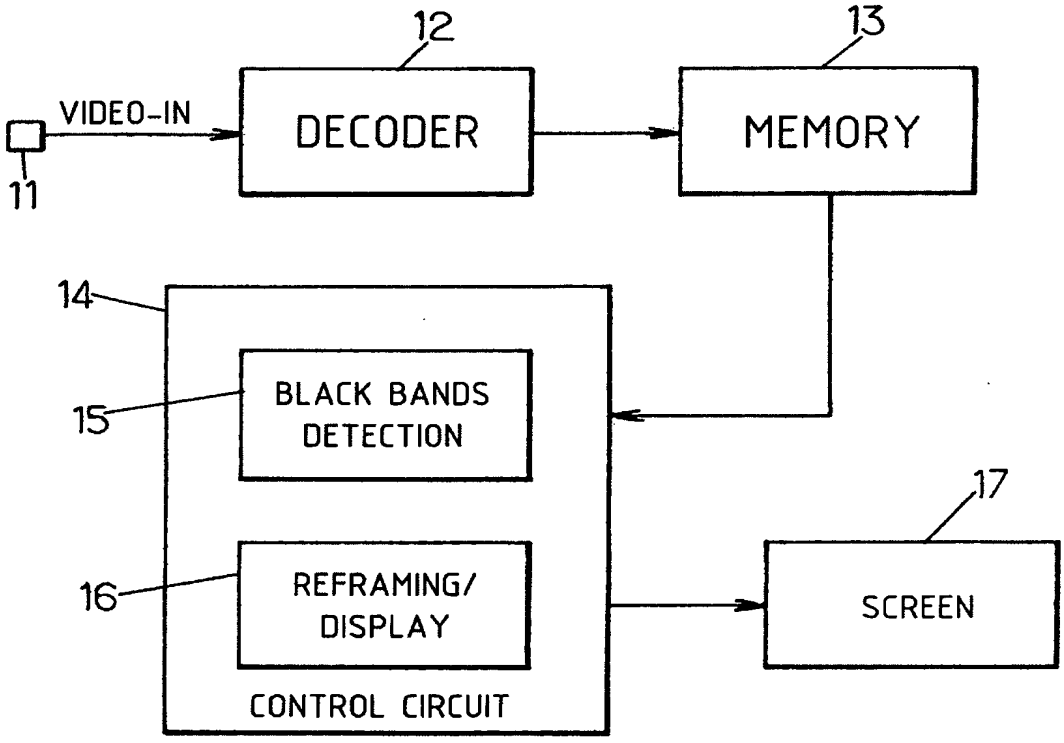

12
13
VIDEO-IN
DECODER
MEMORY
11
14
15
BLACK BANDS
DETECTION
17
16
REFRAMING/
DISPLAY
SCREEN
CONTROL CIRCUIT

FIG.2.

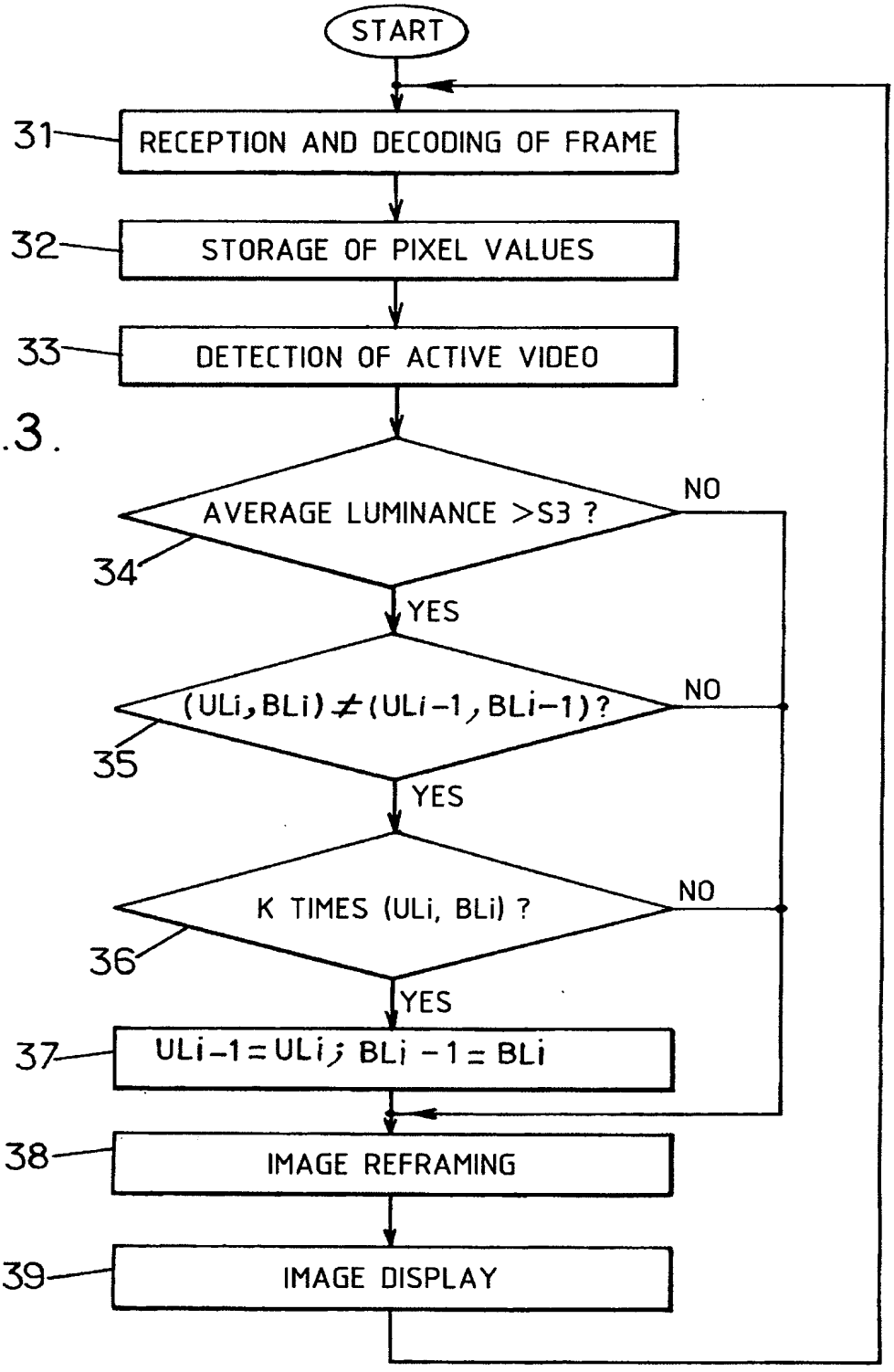

START
31
RECEPTION AND DECODING OF FRAME
32
STORAGE OF PIXEL VALUES
33
DETECTION OF ACTIVE VIDEO
AVERAGE LUMINANCE >S3 ?
NO
34
YES
(ULi, BLi) ≠ (ULi-1, BLi-1) ?
NO
35
YES
K TIMES (ULi, BLi) ?
NO
36
YES
37
ULi-1 = ULi; BLi - 1 = BLi
38
IMAGE REFRAMING
39
IMAGE DISPLAY

FIG.3.

FIG.4.

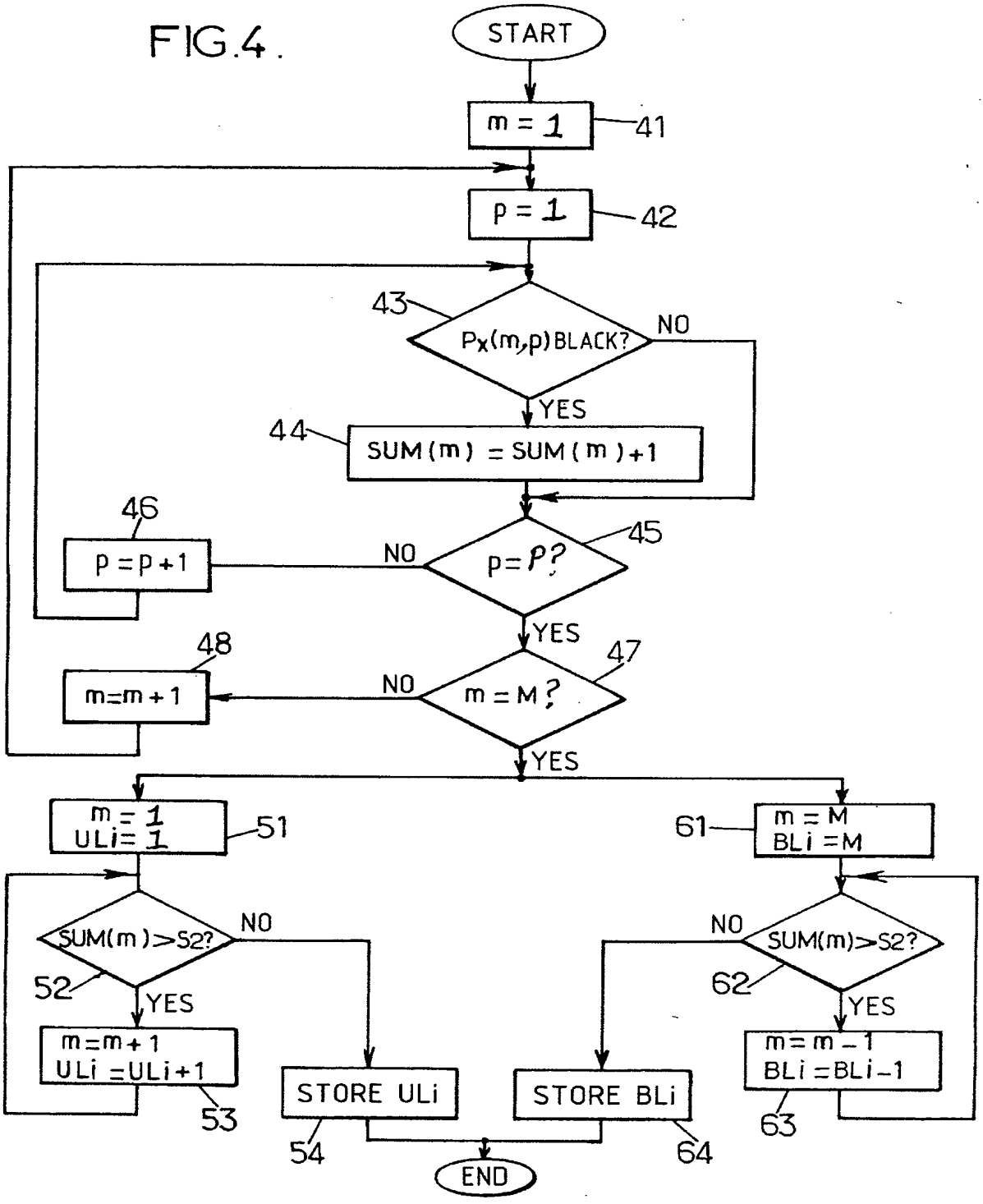
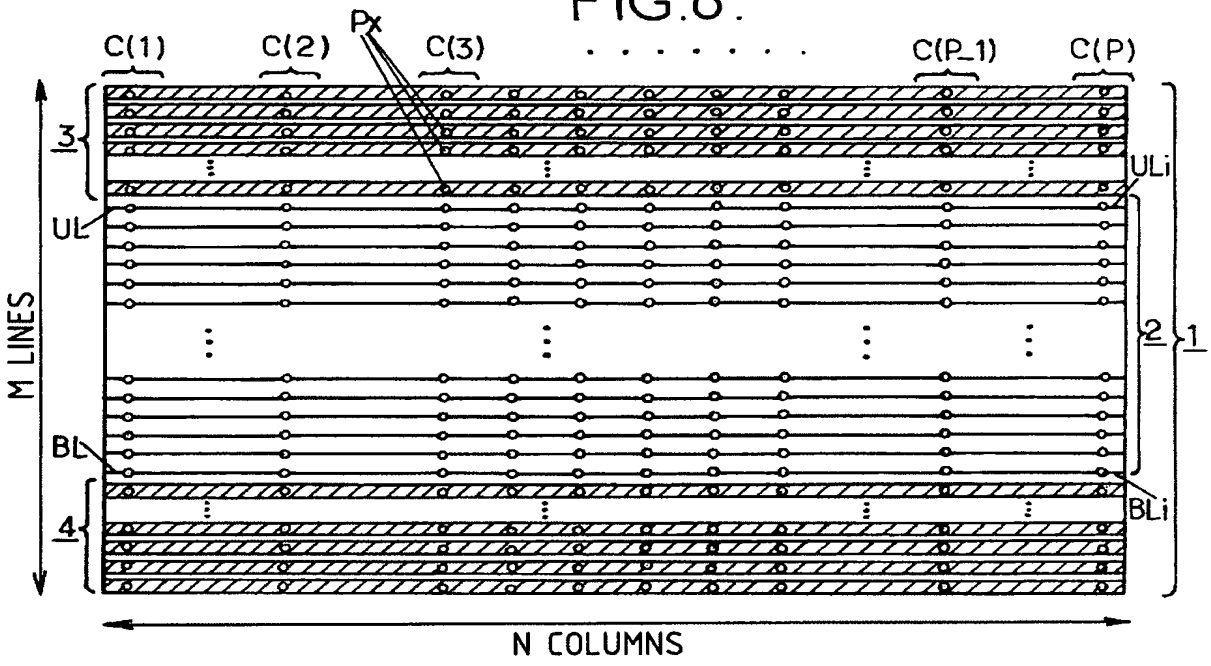

START
m = 1
41
p = 1
42
43
Px(m,p) BLACK?
NO
YES
44
SUM(m) = SUM(m)+1
46
p = p+1
NO
p = P?
45
YES
48
m=m+1
NO
m = M?
47
YES
m = 1
ULi = 1
51
61
m = M
BLi = M
SUM(m)>S2?
NO
52
YES
m=m+1
ULi = ULi+1
53
NO
SUM(m)>S2?
62
YES
m = m-1
BLi = BLi-1
63
STORE ULi
54
STORE BLi
64
END

FIG.6.


C(1)
C(2)
Px
C(3)
C(P_1)
C(P)
3
ULi
UL
2
1
M LINES
BL
BLi
4
N COLUMNS

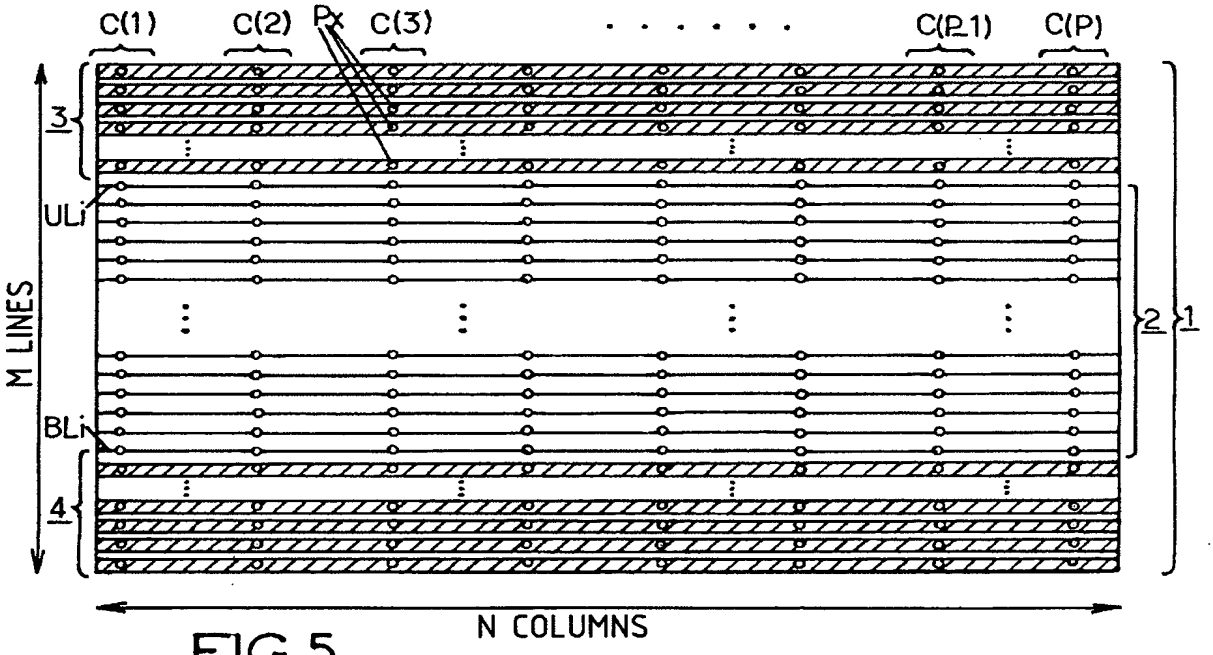

C(1)
C(2)
Px
C(3)
C(P_1)
C(P)
3
ULi
2
1
M LINES
BLi
4
N COLUMNS

FIG.5.